## **Briefing Statement**

Bureau:	National Park Service
Issue:	Emerging chikungunya outbreak in the Caribbean
Park Sites:	BUIS, CHRI, SAJU, SARI, VICR, VIIS
Date:	February 25, 2014

**Background**: On December 5, 2013, 2 cases of chikungunya fever—a mosquito-borne disease—were confirmed among residents of Saint Martin (French side) who reported no recent travel history. Chikungunya virus (CHIKV) is endemic in parts of Africa, southeast Asia, and the Indian subcontinent. The Saint Martin cases documented the first local transmission of CHIKV in the Americas and suggested that the virus was now established in native mosquito populations.

As of February 21, enhanced surveillance throughout the Caribbean has identified over 6,000 locally-acquired chikungunya cases (confirmed or suspected) in 9 Caribbean nations, including Martinique (3,030 cases), Saint Martin (French side—1,780 cases; Dutch side—65 cases), Saint Barthélemy (350 cases), Guadeloupe (1,380 cases), Dominica (45 cases), Anguilla (11 cases), the British Virgin Islands (5 cases), and Saint Kitts and Nevis (1 case).

The risk of spread of chikungunya to other Caribbean islands is high. There is no vaccine to prevent this disease; the best strategy is to prevent mosquito bites. Park managers in the U.S. Virgin Islands and Puerto Rico should educate employees and visitors on the signs and symptoms of chikungunya fever and support/implement appropriate prevention measures.

## **Current Status:**

- For up-to-date information on CHIKV and the Caribbean outbreak of chikungunya fever:
  - U.S. Centers for Disease Control and Prevention (CDC)
    <u>http://www.cdc.gov/chikungunya/</u>
  - European Centre for Disease Prevention and Control (ECDC)
    http://www.ecdc.europa.eu/en/Pages/home.aspx
  - Pan American Health Organization (PAHO)
  - http://www.paho.org/hq/index.php?lang=en
  - Caribbean Public Health Agency (CARPHA)
    - http://carpha.org/
- Basic facts about chikungunya
  - Viral disease transmitted to people by infected mosquitoes (*Aedes* species)
    - This species bites mainly during the day and can also transmit dengue virus
  - Chikungunya virus (CHIKV) first described in 1952 in Tanzania
  - Besides the Caribbean outbreak, large outbreaks have occurred since 2006 in Kenya, India, Indonesia, Thailand, and other Asian and African countries
- Signs and symptoms
  - Symptoms usually begin 3-7 days (range: 1-12 days) after bite of infected mosquito
    - Up to 25% of people infected with CHIKV do not have any symptoms
  - o The most common symptoms are high fever (≥102 °F) and severe joint pain
    - Joint pain is usually symmetric and occurs most commonly in hands and feet
    - In Makonde (African language), chikungunya means "that which bends", referring to stooped appearance of patients in severe pain
  - Other symptoms include headache, muscle pain, rash, joint swelling, conjunctivitis, and nausea/vomiting
- Treatment

- o There is no specific treatment or vaccine for CHIKV
- Medicines (avoid aspirin) can help relieve fever, joint pain, and other symptoms
- $\circ$   $\,$  A person recovered from chikungunya is likely immune against repeat infections
- Risk for complications
  - Most patients feel better within a week, although joint pain and other chronic symptoms (e.g. fatigue, depression) may persist for months to years
  - People at increased risk for severe disease include:
    - Newborns exposed during delivery
    - Older adults ≥65 years
    - People with chronic medical conditions, such as diabetes, high blood pressure, and heart disease
  - Deaths are rare and occur mostly in older adults
- Prevention measures
  - Wear long-sleeved shirts and long pants
  - Use repellents containing 30% or less DEET or 19% picaridin on exposed skin (<u>http://www.cdc.gov/westnile/faq/repellent.html</u>)
  - Wear permethrin-treated clothing, especially socks and pants
    - DO NOT treat skin with permethrin
  - Use mechanical tools such as bed nets, window/door screens, and indoor ceiling fans to prevent mosquito access and landing
  - Empty standing water from outdoor containers (e.g. flowerpots, tires, tarps)
  - Avoid outdoor activity at dawn and dusk (peak biting time)
  - Anyone who thinks they might have chikungunya should see a healthcare provider and remain under a mosquito bed net for duration of fever to reduce potential for infecting other mosquitoes
  - People at increased risk for severe disease should consider not traveling to areas with ongoing chikungunya outbreaks
- Implications and actions for NPS managers
  - Provide and review prevention measures with employees, concessioners, and volunteers, and post alerts on websites and in visitor centers
    - <u>http://www.cdc.gov/chikungunya/pdfs/CHIKV\_FACT%20SHEET\_CDC\_Gener\_al%20Public\_cleared.pdf</u>)
    - Emphasize that primary prevention strategy is through education and risk reduction by avoiding mosquitoes and preventing mosquito bites
  - Implement procedures (e.g. job hazard analyses) to improve workplace compliance with repellent use and other personal protective measures
  - Document locations of and eliminate manmade mosquito habitat around humanoccupied areas (in accordance with NPS mission and policies)
  - Prioritize and track maintenance work orders (e.g. installing/fixing screens) to reduce mosquito habitat and exposure at work or at home
  - Contact your park/regional IPM coordinator for additional information on managing mosquitoes in human-occupied areas
    - Mosquito repellents, if purchased with NPS funds, must be approved prior to use through the NPS Pesticide Use Proposal System; No approval needed for repellents purchased for use on your person using personal funds
  - $\circ$   $\,$  Be proactive! Communicate with your local vector control and health officials
    - If/when cases are identified near your park, request assistance and consult with IPM, Office of Public Health, and Risk Management

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